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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,550	10/27/2003	Ronald S. Cok	87182THC	9646

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EXAMINER

COLON, GERMAN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,550

Applicant(s)

COK, RONALD S.

Examiner

German Colón

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1003:0505.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the first portions" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the cover" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-10, and 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Arnold et al. (US 6,670,772).

Regarding claim 1, Arnold discloses an organic light emitting display (see Figs. 1 and 4), comprising:

- a substrate **12**;

- a plurality of OLEDs formed on the substrate, the OLEDs emitting polarized light, wherein the OLEDs comprise:

 - a layer **16** defining a periodic grating structure,

 - a first electrode layer **18** conforming to the grating structure

 - an OLED material layer **19** formed over the first electrode layer and conforming to the grating structure, and

 - a second electrode layer **30** formed over the OLED material layer and conforming to the grating structure, wherein the first and/or second electrode are metallic layers, whereby the periodic grating structure induces surface plasmon cross coupling in the metallic electrode layer to emit polarized light; and

- a polarizer (see Col. 10, lines 60-63) located over the substrate through which the polarized light is emitted.

Regarding claims 3 and 4, Arnold discloses the display being a top emitting display (see Fig. 1) having an encapsulating cover **36**, and the polarizer is affixed to the encapsulating cover (see Col. 10, lines 54-64); or the display being a bottom emitter (see Fig. 4) and the polarizer being affixed to the substrate (Col. 10, lines 54-64, in view of Col. 5, lines 2-5).

Regarding claim 5, Arnold discloses the OLED material layer including portions for emitting different colors (see Figs. 1 and 4) and the period of the grating structure being different for the different colors (see Col. 4, lines 11-15).

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Regarding claim 6, Arnold discloses the layer defining a grating structure being a light-absorbing layer (see Col. 4, lines 26-28).

Referring to claim 7, Arnold discloses the metallic layers being opaque (see at least Col. 6, lines 19-20).

Referring to claim 8, Arnold discloses the grating structure being a two-dimensional grating.

Referring to claim 9, Arnold discloses the display being an active matrix display (see Col. 3, lines 13-16).

Referring to claim 10, Arnold discloses the display device being a passive matrix display (see Fig. 4).

Referring to claim 12, Arnold discloses the first electrode being ITO (see at least Col. 6, line 10)

In regards to claim 13, the claim is rejected for the reasons stated in the rejection of claim 1, wherein the layer defining the periodic structure is insulating (see Col. 3, line 58).

In regards to claim 14, Arnold discloses the display further comprising a diffuser (see Col. 4, line 67)

In regards to claims 15 and 16, Arnold discloses the diffuser being incorporated into the cover of a top emitting display or the substrate of a bottom emitting display (see Col. 5, lines 2-5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al. (US 6,670,772).

Regarding claim 2, Arnold discloses the claimed invention except for the limitation of the polarizer being a circular polarizer.

However, it has been held to be within the general skill of an artisan to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made use a circular polarizer as the polarizer disclosed by Arnold, since the selection of known materials for a known purpose is within the skill of the art. Further, it is well known in the art the suitability of circular polarizer to reduce glare and improve contrast in display devices.

7. Claims 1-5, 8-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase (US 6,815,886) in view of May (US 6,211,613).

Regarding claim 1, Kawase discloses an organic light emitting display (see Fig. 10), comprising:

a substrate 200;

a plurality of OLEDs formed on the substrate, the OLEDs emitting polarized light, wherein the OLEDs comprise:

- a layer **210** defining a periodic grating structure,
- a first electrode layer **220** conforming to the grating structure
- an OLED material layer **240** formed over the first electrode layer and conforming to the grating structure, and

- a second electrode layer **260** formed over the OLED material layer and conforming to the grating structure, wherein the first and/or second electrode are metallic layers, whereby the periodic grating structure induces surface plasmon cross coupling in the metallic electrode layer to emit polarized light. Kawase is silent regarding the OLED further comprising a polarizer.

However, in the same field of endeavor, May discloses an EL device comprising a circular polarizer, and teaches the suitability of said polarizer for improving the contrast of the display, by absorbing light from the environment (see at least Col. 1, lines 55-58). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polarizer to the device of Kawase, in order to increase the contrast of the image.

Regarding claim 2, Kawase-May discloses the polarizer being a circular polarizer (see '613, Col. 1, lines 55-58).

Regarding claims 3 and 4, Kawase-May discloses the display being a top emitting display having an encapsulating cover, and the polarizer is affixed to the encapsulating cover; or the display being a bottom emitter and the polarizer being affixed to the substrate (see Kawase in view of Col. 2, lines 32-45 of May).

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Regarding claim 5, Kawase discloses the OLED material layer including portions for emitting different colors and the period of the grating structure being different for the different colors (see Col. 10, lines 34-38).

Referring to claim 8, Kawase discloses the grating structure being a two-dimensional grating (see Col. 6, lines 56-57).

Referring to claims 9 and 10, Kawase-May discloses the claimed invention except for the limitation of the display being an active matrix display; Kawase discloses a passive matrix display.

However, the Examiner notes that regardless of whether a passive matrix or an active matrix type is used, the EL device has a capacitor structure with an EL layer sandwiched by a cathode and an anode, and the EL display operates under the principle of causing the EL layer to luminesce by the flow of electric current. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either a passive or active matrix display, since both method of driving the display operate under the same principles. Further, it is well known in the art that active matrix type provide a high-resolution display.

Referring to claim 12, Kawase discloses the first electrode layer being ITO (see at least Col. 8, line 67).

In regards to claim 13, the claim is rejected over the reasons stated in the rejection of claim 1.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase-May as applied to claim 1 above, and further in view of Terao et al. (US 6,133,581).

Kawase-May discloses the claimed invention except for the limitation of the first electrode being non-metallic and comprising a metallic layer formed on portions of the first electrode. However, in the same field of endeavor, Terao discloses an EL device comprising first electrodes including a non-metallic layer and a metallic layer formed on portions of the non-metallic layer, in order to reduce the resistance of the non-metallic layer, providing a high light emitting efficiency and a small power consumption (see Col. 4, lines 1-4). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a metallic layer to the non-metallic electrode with the purpose of reducing the resistance of the electrode, while providing a high light emitting efficiency and a small power consumption.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The reference cited in the Notice of Reference Cited, items E-I disclose an EL device having a grating structure and the electrodes and EL layer conforming to said grating structure.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC
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